

ABSTRACT

A system and method determines the proximity of the target node to the source node from the time required to communicate messages within the node-verification protocol. The node-verification protocol includes a query-response sequence, wherein the
5 source node communicates a query to the target node, and the target node communicates a corresponding response to the source node. The target node is configured to communicate two responses to the query: a first response that is transmitted immediately upon receipt of the query, and a second response based on the contents of the query. The communication
10 time is determined based on the time duration between the transmission of the query and receipt of the first response at the source node and the second response is compared for correspondence to the query, to verify the authenticity of the target node.